Remarks

I Introduction

This is in response to the Office Action dated May 13, 2004. The Office Action objected to the Title of the invention as not being descriptive. The Office Action objected to the drawings for various reasons. The Specification was objected to due to several grammatical and typographical errors. Claims 1-26 were objected to because of several informalities. Claims 15-19 and 21-22 were rejected under 35 U.S.C. 112 ¶1 as failing to comply with the enablement requirement because "claim 15 never discloses the decoder receiving encoded text". Claims 10, 15-22 and 24 were rejected under 35 U.S.C. §112 ¶2 as being indefinite for failing to particularly point out and distinctly claim the subject mater which applicant regards as the invention. The Office Action rejected claims 1-5, 7-20 and 21-26 under 35 U.S.C. §102(b) as being anticipated by Witten et al. (*On the Privacy Afforded by Adaptive Text Compression*). Claims 6 and 20 were rejected under 35 U.S.C. §103(a) as being unpatentable over Witten et al. and further in view of "examiner's official notice".

Applicants have amended claims 1, 5, 6, 8-11, 14, 15 and 19-25 in response to the Examiner's claim objections (Office Action paragraphs 10 and 11) and rejections under 35 U.S.C. §112 (Office Action paragraphs 12-20). Applicants have amended the drawings in response to the Examiner's objections (Office Action paragraphs 6 and 7). Applicants have amended the Title, Abstract, and various portions of the specification in response to the Examiner's objections (Office Action paragraphs 2, 3, 8 and 9). Applicants traverse the claim rejections under 35 U.S.C. §102(b) and 35 U.S.C. §103(a). Claims 1-26 are currently pending.

II. Objections to the Drawings

Applicants have amended the drawings as specified above in the section entitled Amendments to the Drawings. Applicants request withdrawal of the drawing objections based on these drawing amendments.

III. Objections to the Specification

Applicants have amended the Title. The amended Title is indicative of the invention to which the claims are directed. Withdrawal of the objection to the Title is requested.

The Abstract has been amended to correct a typographical error. As such, withdrawal of the objection to the Abstract is requested.

The paragraph at page 8, lines 12-22 of the specification has been amended to clarify that frequency table 130 is shown in Fig. 5 and that frequency table 130 is illustrated in Fig. 4 as RAMs 126. Withdrawal of the objection is requested.

IV. Claim Objections and Claim Rejections under §112

a. Claim Objections

With respect to the claim objections set forth paragraph 11 of the Office Action, the claim limitations of "the at least one' and "the at least two" have been amended to "said at least one" and "said at least two" in accordance with the Examiner's suggestion. Further, the claim limitation of "a different at least one frequency table" has been amended to read "a different frequency table". In view of the claim amendments, Applicants request withdrawal of the claim objections set forth in paragraph 11 of the Office Action.

b. Claim Rejections

Claim 15 was rejected because it "never discloses the decoder receiving encoded text" and "[i]t is inherent that the decoder receives encoded text in order for it to decode". In response, Applicants have amended the relevant limitation of claim 15 to read "a decoder, outputting the plain text, based on the working key, the main key, cipher ~~the plain~~ text, ~~the~~ said at least two frequency counts". The "the plain text" has been changed to "cipher text" so that the decoder output is based on, among other things, the cipher text". In view of this amendment, Applicants request withdrawal of the rejection to claim 15 set forth in paragraph 13 of the Office Action. Claim 15 was also rejected because of its two recitations of "plain text". In response, Applicants have amended the term "plain text" in line 4 to read "the plain text". In view of these amendments, Applicants request

withdrawal of the rejections to claim 15 set forth in paragraphs 13 and 19 of the Office Action.

Claims 10 and 24 were rejected in view of the claim limitation "of a length equal to a key". In response, claims 9, 10, 23 and 24 have been amended. More particularly, claims 9 and 23 have been amended to include "key bits of a key", and claims 10 and 24 have been amended to claim "of a length equal to said key". Applicants request the withdrawal of the rejection of claims 10 and 24 because it is now clear that "said key" refers back to the key recited in the independent claim, and therefore the length is determinable.

Claim 20 has been amended to correct a typographical error so that claim 20 is now dependent upon claim 15. Withdrawal of the rejection to claim 20 is requested.

Claim 21 has been amended in accordance with the Examiner's assumption as set forth in paragraph 18 of the Office Action. Withdrawal of the rejection to claim 21 is requested.

V. Claim Rejections under §102 and §103

The Office Action rejected claims 1-5, 7-20 and 21-26 under 35 U.S.C. §102(b) as being anticipated by Witten et al. (*On the Privacy Afforded by Adaptive Text Compression*). In order for a claim to be anticipated under 35 U.S.C. §102, **each and every** limitation of the claim must be found either expressly or inherently in a single prior art reference. PIN/NIP, Inc. v. Platte Chem. Co., 304 F.3d 1235, 1243 (Fed. Cir. 2002). In the present case, Witten et al. does not show each and every limitation of claims 1-5, 7-20 and 21-26.

First, there are several limitations of claim 1 which are not disclosed by Witten et al. Claim 1 contains the limitation of:

> a random number generator, receiving a main key, determining a working key using at least one random number and outputting the working key;

While there is disclosure in Witten et al. of a random number generator, there is no disclosure in Witten et al. of the random number generator "receiving a main key" and "determining a working key". The distinction between the main key and the working key is important and is described in the specification for example at page 3, paragraph 1 and

page 4, first paragraph of the Detailed Description. Claim 1 is not anticipated by Witten et al. under the strict anticipation standard because Witten et al. does not disclose a random number generator receiving a main key and determining a working key. If the Examiner persists in the §102 rejection, Applicants respectfully request that the Examiner particularly address this claim limitation and cite particular portions of Witten et al. that disclose this limitation.

In addition, claim 1 contains the limitation of

> a model, receiving the main key, the working key and plain text and generating at least two frequency counts;

There is no disclosure in Witten et al. of a model receiving a "main key" and a "working key". The Office Action states that "Witten also disclosed a random number generator taking a secure seed and producing a key for the model", and cites Witten at page 405, col. 1, paragraph 1. However, the cited section of Witten et al. does not disclose a main key and a working key as claimed in claim 1. The seed in Witten at al. is not a key, but is only used to generate the random numbers.

Independent claim 9 is also allowable over Witten et al. Independent claim 9 contains the limitation of:

> processing random bits and key bits of a key to generate at least one frequency table

There is no such disclosure in Witten et al. The bit-based encryption technique of the present invention provides advantages over the prior art, as described in the specification in the last paragraph of page 3 and at page 14 paragraph 2. With respect to claim 9, the Office Action cites Witten et al. as "using a seed and a random number to create a frequency table". However, this does not disclose the bit-based processing as claimed in claim 9. Witten et al. generates the frequency table using random numbers generated by a random number generator. The invention of claim 9, on the other hand, generates the frequency table using "random bits and key bits of a key" to generate the frequency table. Witten et al. does not disclose the use of key bits of a key to generate the frequency table, and therefore it cannot anticipate claim 9 under the strict anticipation standard.

Independent claim 15 contains the limitation of:

> a model, receiving a main key, a working key and plain text and generating at least two frequency counts;

Witten et al. does not disclose these claim limitations for the same reasons as those discussed above in conjunction with the similar limitation of claim 1. In addition, independent claim 15 contains the limitations of:

> a decoder, outputting the plain text, based on the working key, the main key, cipher the plain text, the said at least two frequency counts.

There is no disclosure in Witten et al. of a decoder, outputting the plain text, **based on the working key, the main key**, ... As discussed above in connection with Claim 1, Witten et al. does not disclose a "working key" and "main key" as claimed. As such, claim 15 is allowable for this additional reason. Further, claim 15 contains the limitation of "a random number generator, receiving the plain text ...". There is no disclosure in Witten et al. of a random number generator receiving plain text. Therefore, claim 19 is allowable for this additional reason as well. If the Examiner persists in the rejection of claim 19 based on Witten et al., Applicants respectfully request that the Examiner particularly address these claim limitations and specifically cite portions of Witten et al. which disclose these claim limitations.

Independent claim 23 contains the limitation of:

> processing random bits and key bits of a key to generate at least one frequency table,

and is allowable for the reasons discussed above in conjunction with the similar limitation of claim 9.

For the reasons discussed above, all independent claims are allowable over Witten et al. Witten et al. fails to teach each and every limitation of the claims, and as such the strict anticipation standard of §102 has not been met. All remaining dependent claims depend upon an allowable independent claim and are therefore also allowable. Further, the dependent claims add additional allowable subject matter as follows.

Dependent claims 2 and 16 are directed to the limitation wherein the working key produced by the random number generator is variable in length. The cited portion of Witten et al. discloses fixed lengths (i.e., "single-character") and not variable lengths.

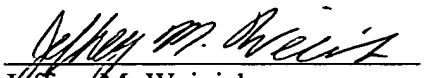
Dependent claims 4 and 18 are directed to the limitation of "the working key and the main key are different". The Office Action states that these claims are anticipated by Witten et al. because Witten et al. discloses "a seed and a random number, which are used as the two keys". This is an inaccurate characterization of Witten et al. As described above, the seed is used to generate the random numbers in Witten et al., but the seed itself is not a key. There is no disclosure in Witten, et al. of the different working and main keys.

Dependent claims 7, 13 and 21 are directed to the limitation of "a bit-based processing scheme". The Office Action rejects these claims by stating that "Witten disclosed the possibility of choosing the alphabet to be the binary alphabet". However, the mere disclosure of an alphabet containing two symbols (0,1) does not anticipate the claimed bit-based **processing scheme**.

VI. Conclusion

For the reasons discussed above, all pending claims are allowable over the cited art. Reconsideration and allowance of all claims is respectfully requested.

Respectfully submitted,



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